

# APPEAL, STAFF REPORT & RECOMMENDATION TO THE HEARINGS EXAMINER



**Project Name:** FOREST CREEK SUBDIVISION APPEAL

**Case Number:** APL2005-00016

**Hearing Examiner:** Joe Turner

**Location:** NE 104<sup>th</sup> Street and NE 28<sup>th</sup> Avenue

**Appeal:** Appeal of the determination of the stormwater curve number (CN) by the County Engineering Services Team Leader

**Appellant:** Erikson & Hirokawa, PLLC  
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**Applicant/Owner:** Steven M. Nelson  
2808 NE 104<sup>th</sup> Avenue  
Vancouver, WA 98663

## **RECOMMENMDATION**

**Uphold Planning Director's Determination**

**Team Leader Initials:** \_\_\_\_\_ **Date Issued:** \_\_\_\_\_

**Public Hearing Date:** September 22, 2005

### **County Review Staff:**

	<b><u>Name</u></b>	<b><u>Phone Ext.</u></b>	<b><u>E-mail Address</u></b>
<b>Planner:</b>	Richard Daviau	4895	richard.daviau@clark.wa.gov
<b>Engineer:</b>	Ali Safayi	4102	ali.safayi@clark.wa.gov
<b>Team Leader:</b>	Susan Ellinger	4272	susan.ellinger@clark.wa.gov
<b>Eng. Supervisor:</b>	Richard Drinkwater, P.E.	4492	richard.drinkwater@clark.wa.gov

**Comp Plan Designation:** Urban Low Density

**Zoning:** R1-6

**Legal Description:** (Parcel Numbers 189492-000, 189537-000, 189553-000) Southeast Quarter of Section 35, Township 3 North Range 1 East of Willamette Meridian

**Applicable Laws:**

Clark County Code Chapters: 40.220.010 (Single-Family Residential Districts); 40.380 (Stormwater and Erosion Control); 40.5 (Procedures); 40.630.070 (Appeals Procedures); and RCW 58.17 (State Platting Laws)

**Neighborhood Association/Contact:**

Sherwood Hills, **Contact** – Dick Durland, **Address** – 10525 NE Sherwood Drive, Vancouver, WA 98686, **Phone** – (360) 576-0981, **E-mail** - [durland2002@hotmail.com](mailto:durland2002@hotmail.com)

**Project Description**

The original subdivision application (PLD2004-00014) was to subdivide an approximate 6.3-acre parcel into 17 single-family residential lots in the R1-6 Zoning District.

**Background**

The preliminary subdivision approval was issued for Forest Creek on August 13, 2004 (reference PLD2004-00014) consisting of 17 single-family residential lots. On July 11, 2005 (during the final engineering review) Mark Erikson, representing the applicant, filed an appeal of the determination of the stormwater curve number (CN) by the County Engineering Services Team Leader.

**Appeal Issues and Staff Response**

During the land use hearing for this subdivision, the applicant's engineer proposed a CN (curve number)<sup>1</sup> value of "72" for the site's "pre-developed" condition. This was disputed by Mr. Peter Tuck, P.E., testifying on behalf of the neighboring property owner. Mr. Tuck argued that the CN should be "64" which corresponds to undisturbed mature forest. The Hearing Examiner concluded: "because the issue is highly technical and relates to common engineering practices, the authority should be delegated to the chief development review engineer to determine what CN should be used in this case." Subsequently, the Examiner imposed a condition of approval (Condition A-14) as follows:

"The stormwater calculations and sizing of the water quality and detention facilities shall be based on the runoff volume from the accurately measured impervious surface areas. The chief development review engineer shall determine the appropriate CN to use."  
(See The Examiner's Final Order for Forest Creek Subdivision, Exhibit #5)

During the review of the final stormwater plan, Richard Drinkwater, P.E., acting as the Engineering Services Team Leader, determined that a CN of "64" should be used when

<sup>1</sup> Relationships between land use, soil type, vegetation cover, interception, infiltration, surface storage, and runoff are characterized by a single runoff coefficient called "curve number". Stormwater Management Manual for the Puget Sound Basin, section III-1.4.2, page III-1-8, February 1992 edition.

calculating the pre-developed stormwater runoff from this particular site. The determination, as the Examiner indicated, was based on the common engineering practice in line with the county Stormwater and Erosion Control Ordinance (CCC 40.380).<sup>2</sup>

The available data and documents used to arrive at such a conclusion included aerial photos obtained from the county GIS mapping system (See Exhibit #6), Table III-1.3, SCS Western Washington Runoff Curve Numbers of the BMP Manual (Stormwater Management Manual for the Puget Sound Basin, February 1992, See Exhibit #7), opinion provided by Ed O'Brien of Department of Ecology (See Exhibit #8). Staff obtained additional information by utilizing other sources as follows:

The BMP Manual suggests a CN of 64 for undisturbed forest land and a CN of 72 for young second growth. *Source: Table III-1.3, SCS Western Washington Runoff Curve Numbers, Stormwater Management Manual for the Puget Sound Basin, February 1992*

In forest-range regions of the western United States, soil group, cover type, and cover density are the principle factor used in estimating CN value. The source suggests CN values for woods ranging from 55 to 66 for hydrologic soil group "B". *Source: SCS National Engineering Handbook, section 4: Hydrology, by Soil Conservation Service, dated August 1972*

Another source suggests CN value of 66 for wood or forest land, with thin stand, poor cover, and no mulch and CN of 55 for lands with good cover (protected from grazing and litter and brush cover). *Source: Urban Hydrology for Small Watersheds, Technical Release No.55 by the Soil Conservation Service dated January 1975*

The widely used hydrologic analysis computer software, HydroCad, also used by the applicant's engineer, suggests a CN of 66 for forests in poor condition (forest litter, small trees, and brush are destroyed by heavy grazing or regular burning); a CN of 60 for forests in fair condition (woods are grazed but not burned, and some forest litter covers the soil); and a CN of 55 for soils in good condition (woods are protected from grazing, and litter and brush adequately cover the soil). *Source: HydroCad stormwater modeling Owner Manual, Version 6, Appendix A2*

## CONCLUSION

Based on the code, the BMP Manual, professional engineering judgment, aerial photos exhibiting the least developed conditions over the past 30 years, expert opinion of DOE

<sup>2</sup> CCC 40.380.040.C(2)(b) provides as follows:

Table III-1.3, SCS Western Washington Runoff Curve Numbers of the BMP Manual shall be used to calculate predevelopment and post-development runoff with the following constraints:

- (1) Predevelopment land use shall be established as the use over the last thirty (30) years which results in the least amount of site runoff, as demonstrated by evidence acceptable to the responsible official. Acceptable evidence may include, but not be limited to thirty (30) year old aerial photos, crop history or tax assessor records.

staff, and available reference documents pertinent to hydrologic analyses, staff believes that the correct CN value to use in calculating the pre-developed runoff should be 64.

## RECOMMENDATION

Based on the above findings and information in the record, the Development Services Manager recommends the Hearings Examiner DENY the appeal and uphold the Engineering Services Team Leader Determination.

## HEARING EXAMINER DECISION AND APPEAL PROCESS

This report to the Hearing Examiner is a recommendation from the Development Services Division of Clark County, Washington.

The Examiner may adopt, modify or reject this recommendation. The Examiner will render a decision within 14 calendar days of closing the public hearing. The County will mail a copy of the decision to the applicant and neighborhood association within 7 days of receipt from the Hearing Examiner. All parties of record will receive a notice of the final decision within 7 days of receipt from the Hearing Examiner.

An **appeal** of any aspect of the Hearing Examiner's decision, except the SEPA determination (i.e., procedural issues), may be appealed to the Board of County Commissioners only by a party of record. A party of record includes the applicant and those individuals who signed the sign-in sheet or presented oral testimony at the public hearing, and/or submitted written testimony prior to or at the Public Hearing on this matter.

The appeal shall be filed with the Board of County Commissioners, Public Service Center, 1300 Franklin Street, Vancouver, Washington, 98668, within fourteen (14) calendar days from the date the notice of final land use decision is mailed to parties of record.

Any appeal of the final land use decisions shall be in writing and contain the following:

1. The case number designated by the County and the name of the applicant;
2. The name and signature of each person or group (petitioners) and a statement showing that each petitioner is entitled to file an appeal as described under Section 40.510.030(H) of the Clark County Code. If multiple parties file a single petition for review, the petition shall designate one party as the contact representative with the Development Services Manager. All contact with the Development Services Manager regarding the petition, including notice, shall be with this contact person;
3. The specific aspect(s) of the decision and/or SEPA issue being appealed, the reasons why each aspect is in error as a matter of fact or law, and the evidence relied, on to prove the error; and,

4. A check in the amount of **\$286** (made payable to the Clark County Board of County Commissioners).

**Attachments:**

- List of Exhibits Received to Date

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A copy of the appeal, preliminary proposal, and County Code are available for review at:

**Public Service Center  
Department of Community Development  
1300 Franklin Street  
P.O. Box 9810  
Vancouver, WA 98666-9810  
Phone: (360) 397-2375; Fax: (360) 397-2011**

A copy of the Clark County Code is also available on our Web Page at:

<http://www.co.clark.wa.gov>